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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
Implementation of Section 273 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996	)	CC Docket No. 96-254

REPLY COMMENTS OF FUJITSU NETWORK COMMUNICATIONS, INC.

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SUMMARY

Fujitsu Network Communications, Inc. ("FNC") is in support of the Federal Communications Commission's goal to assure the continued competitiveness of the telecommunications equipment market. It files these Reply Comments in this Docket out of concern that, rather than accelerating the deployment of new telecommunications services, some aspects of the Commission's consideration could detract from the efficacy of processes already in place and which have been refined over many years. FNC concurs with many of the Comments made by Northern Telecom, ANSI, and ATIS with respect to standards development in the United States; it would like to further clarify the roles of the various collaborative bodies which are involved in matters related to telecommunications standards.

For the good of the industry, where standardization deals with interfaces and interoperability, all standards organizations' processes need to be at least as open and public as exist today, whereas those developing technical specifications for one or a few entities related to specific product development and/or purchase decisions may be closed.

In general, FNC believes that:

- Common standards and interoperability are not only desirable but necessary to promote innovation, distribute technology, and lower the price of products and services. An environment should permit users to

chose products and services from a variety of suppliers and to use such products and services in an integrated system; and

- In establishing standards, it is necessary to adopt a free and open technology, rather than a closed proprietary standard. Technology in any standard should be available to all suppliers on reasonable terms and conditions. The process to revise standards should be transparent. Standards should not be used to give competitive power to any specific company or group.

FNC respectfully requests that the Commission carefully consider the potential which quasi standard-setting bodies could have on the existing standardization processes if they do not comply with at least the open processes that exist today, and thus could have on the deployment of new nationwide and global telecommunications services.

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REPLY COMMENTS OF FUJITSU NETWORK COMMUNICATIONS, INC.

Fujitsu Network Communications, Inc. ("FNC") hereby replies to the comments on the Commission's Notice of Proposed Rulemaking ("Notice") filed February 24, 1997, addressing, among other things, the potential impact of the Implementation of Section 273 of the Communications Act of 1934, as amended by the Telecommunications Act of 1996 ("1996 Act") on the development of telecommunications standards in the United States. FNC's reply comments herein focus first on the issues related to standards, and second on the nature and degree of technical information required to be provided. As set forth below, the Comments filed in this proceeding demonstrate the importance of assuring that all standards which are for or affect the interoperability between and among networks, and between and among customer premises equipment ("CPE"), be developed in open fora, which are consensus based, and provide for adequate notice and due process. Private or

"closed" development in this context cannot be permitted as it would adversely affect the state of competition in manufacturing and services which the 1996 Act is meant to foster, not curtail.

- Common standards and interoperability are not only desirable but necessary to promote innovation, distribute technology, and lower the price of products and services. An environment should permit users to chose products and services from a variety of suppliers and to use such products and services in an integrated system; and
- In establishing standards, it is necessary to adopt a free and open technology, rather than a closed proprietary standard. Technology in any standard should be available to all suppliers on reasonable terms and conditions. The process to revise standards should be transparent. Standards should not be used to give competitive power to any specific company or group.

Next, FNC concurs with some commenters that the Commission proposes certain rules and remedies which will unnecessarily burden manufacturers, local exchange carriers, and others who participate in the development of standards for the public network. FNC supports the objectives of the 1996 Act to hasten delivery of advanced services and provides these reply comments to help the Commission achieve that result while avoiding the possibility of severe negative impact on innovative product introductions which could stifle competition and the accelerated growth of public access to networking services which we all desire.

INTRODUCTION

FNC is a major supplier of telecommunications equipment in the United States, with manufacturing facilities in Richardson, Texas. Like most other manufacturers of telecommunications equipment, FNC enjoys a variety of beneficial relationships with the Bell Operating Companies ("BOCs") and expects to continue those relationships. In order to sell products to the BOCs, the competitive local exchange carriers ("CLECs") and others subject to § 251(a)'s obligation to interconnect, FNC's network interfaces will have to be in accord with existing and new standards.

FNC participates in numerous telecommunications standards development efforts. A few of the accredited telecommunications standards-setting bodies in which FNC has participated include EIA, IEEE 802, TI, T1A1, and TIA. It has also participated in non-accredited fora, including the ATM Forum, the National Management Forum, the National ISDN Users Forum and DAVIC.

FNC's extensive experience in and dependence upon both domestic and international standards give it insights FNC believes important that the Commission take into consideration in this proceeding. To that end, FNC provides these reply comments intended to expand on how telecommunications standards are currently developed and the potential impact of some of the proposals in the Notice addressed by commenting parties.

I. THE RECORD DEMONSTRATES THE NEED FOR OPEN STANDARDS FOR THE INTERFACES AMONG NETWORKS, AND BETWEEN NETWORKS AND CPE, IN ORDER TO ENSURE INTEROPERABILITY. IF PROMULGATED BY NON-ACCREDITED STANDARDS DEVELOPERS THESE STANDARDS MUST BE DEVELOPED IN TRULY OPEN Fora WITH ANSI- AND ISO-LIKE PROCESSES

As the record demonstrates, telecommunications standards are developed in several different standards or quasi-standards organizations. Some of these organizations have only a national view, but most have an international view. There are accredited standards development organizations ("SDOs") operating under the auspices of entities such as ANSI and international SDOs operating with the recognition of the ISO and others. There are also non-accredited SDOs which develop specifications which reference accredited standards, interpret them, extend them, and generally make pragmatic decisions about the subset of standards to be implemented in a given networking situation.[1]

Historically, these accredited and non-accredited SDOs have generally provided open access to any interested party and those parties have been able to enter or exit the standards development process at will, at any time. The processes surrounding and the fees for participation in many of the non-accredited SDO's standards development work have facilitated open participation. For example, in most cases these SDOs are funded by the participants using either a sliding scale based on revenues, or a flat fee which is generally reasonable. Fees for company-wide

[1] Standards are critical to assuring that all interfaces permit the interoperability of and between networks. There is no room in the context of interfaces for proprietary technology or closed processes.

participation in all T1 technical work are $5,000 per year or less, and there are no per-meeting fees. The ATM Forum annual fee is $10,000 per Principal Member plus $150 per person for each week-long Technical Committee, including lunch. The IEEE 802 committee charges a meeting fee (less than $200) for each individual who attends a week-long meeting and no 802 Committee membership fee.

Nonetheless, in the non-accredited standards organization context, there has been no adequate legal compulsion that these entities, or consortia of individual entities, comply with the open forum and processes that govern those certified by ANSI. ANSI's Comments implicitly recognize the fact that these non-accredited SDOs presently operate under few legally required criteria. Thus, according to ANSI, "if the FCC is seeking qualifications for non-accredited standards developing organizations ("NASDOs") in order to assure that their standards development process is open and consensus based, then the FCC should hold NASDOs to the same requirements and criteria that accredited standards setting entities must meet." ANSI Comments at 3.[2]

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[2] No manufacturer of telecommunications equipment in the United States is forced to participate in the industry's standards development activities or implement its products in accordance with industry specifications. However, in order to ensure interoperability of manufacturers' network equipment with another's and for them to effectively participate in an industry where this is the rule [Act, 251(a)], these standards, requirements, recommendations, and agreements are necessary tools; and whether they are adopted or simply in-progress, they must be available during the manufacturers' development of new network equipment. Even then, a network operator can choose not to require full compliance to the "standards" with the possible result that incompatibilities creep into the national network which require additional design later in the product cycle, or which reduce the value of a fully compliant network product to that carrier.

Most non-accredited standards development organizations in the United States follow processes which are very similar to those of accredited standards development organizations. FNC believes that this should be true of all non-accredited SDOs in the telecommunications industry which develop industry-wide standards, especially fora such as those discussed in Section 273(d)(4) of the 1996 Act. While most non-accredited SDOs to this point have complied with the spirit of openness, this is too important an issue to be left to chance. All non-accredited SDOs must develop standards through open fora, which are consensus based, and provide for adequate notice and comment.

The development of standards, of course, must be contrasted with the development of product specifications for other than interfaces. FNC submits, e.g., that any entity can perform consulting services for clients to develop product specifications, and that this is and should be a private matter. However, if such an arrangement is to result in specifications to which other parties must adhere in order to participate in the nationally and globally interconnected telecommunications market, then its development should be open to all interested parties at any point and the cost of entry should not be so high as to prevent an otherwise viable business entity, including individual proprietorships, from being able to participate.

In the last year, apparently as a test case under the auspices of § 273(d)(4) of the 1996 Act, FNC is aware of one proposed forum, where it was not clear that these processes, *e.g.* open participation, would be met, and thus not clear that the Congress' and the Commission's interest in open standards would be met. This ad

hoc forum was supposedly intended to fill a narrow need, not then supposedly being met, of an existing non-accredited standards development organization. Fees for this new narrowly-focused forum, intended to develop a particular "standard," were solicited in the amount of $70,000 per year up front; yet there was no advance determination that any proposed "standard" would be publicly available; that determination was to be made once funding was in hand and the sponsors had met and agreed. There was a deadline for indicating interest and making full payment. Deadlines were then extended when response was inadequate by the founder's criteria. While FNC was invited to participate, FNC did not join and, therefore, it is not aware of the disposition of this proposed forum or any standard it may have promulgated in this closed environment. It appeared, from informal surveys, that most of even the largest telecommunications equipment vendors and carriers were not attracted to this new venue for standards development. FNC doubts that this forum could be considered "open" given the level of fees necessary to participate, the failure to set out clear objectives, and the failure to commit to open processes.

FNC also shares NorTel's concern, at p. 12 of its Comments, that funding be required as an up front condition of participation. Substantial up front funding requirements "do not allow gradual buy-in, whereas interested parties can assess at various stages the continued investment in a particular standard-setting activity, based, for example, on the scope of the standard. Large up front payments simply do not meet the statute's legal standard of being 'administered' in such a manner as not to unreasonably exclude any interested industry party.

Clearly, subject to the antitrust laws and the Communications Act, manufacturers can participate with other manufacturers and even with telecommunications carriers in the development of specific products. But, in the context of the establishment of network interoperability standards, they must not be allowed to do so except in the context of open fora. Non-accredited SDOs should not be given special treatment through the implementation of § 273 of the 1996 Act. The industry deserves relief from the potential impact of a private consortia being given the authority, by the Commission, to create a private specification which becomes an industry-wide standard at the pleasure of the consortium's members and a time which is most convenient to them, or most inconvenient to their competitors.

Furthermore, access to a standard, once promulgated, is far different than the ability to participate in drafting a standard, or from observing the progress of a draft standard. Manufacturers most often begin the development phase for standards compliance well in advance of the standard becoming a final standard. Manufacturers not provided this open access would be at a severe disadvantage which would affect the balance in favor of competition Congress and the Commission seek.

The members of any closed body which develops a "standard" which is not readily available to the industry during its development phase are in a powerful position to control the market and stifle competition. If the Commission expects a competitive marketplace for telecommunications equipment and services, then full access to the interconnectivity standards, as they are developed and on an open and equitable basis, is extremely important.

II. THE COMMISSION SHOULD ASSUME THAT NO PRIVATE CORPORATION CONTROLS ANY STANDARDS DEVELOPMENT PROCESS.

Under § 273(d)(4) of the 1996 Act, the Congress has made provisions for the organization of non-accredited standards development organizations for the objective of developing industry-wide requirements, which it calls standards.[3] In the past, BellCore has prepared Generic Requirements such as the LSSGR, which may be considered as standard practices, but do not carry the force of ANSI, OSHA, IEEE, ITU, ISO, or other accredited standards. Bellcore's Generic Requirements were developed with funding from their current owners and other clients for the participants' purposes and not expressly as an industry-wide agreement. For example, most private network equipment vendors had little knowledge of the LSSGR generic requirements until their equipment began to be deployed into offices supporting the public switched telephone network.

To the extent that Bellcore's future revised role, post-sale, in the development of such generic requirements is one of a consulting, research and development organization with internal and external clients, there may be nothing different about the relationship than there would be between any other consulting R&D organization and one or more clients. However, FNC does not believe that these activities can or should produce standards.[4] At most, they may only create material to be included in,

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[3] It may take many standards, practiced in unison, to accomplish interoperability. In other words, a complete set of standards are required.

[4] The Commission, and the competitive industry, clearly could not tolerate de facto standards being promulgated by monopolists or a few companies with collective control.

or referenced by, purchase specifications which may reference and expand on standards developed in open public standards development organizations.

Given this perspective, FNC sees no reason for the Commission to concern itself with dispute resolution between a contractor and its clients. Yes, these particular relationships regard telecommunications, but they should not produce industry-wide standards which would affect the nationwide deployment of new telecommunications services.

III. THE RECORD DEMONSTRATES THAT REQUIRING DISCLOSURE AT "THE HIGHEST LEVELS OF DISAGGREGATION" MAY BE UNNECESSARY IN MOST INSTANCES AND POTENTIALLY HARMFUL TO INNOVATION.

Section 251(a) of the 1996 Act requires that each carrier "interconnect with the facilities and equipment of other telecommunications carriers." The requirement is clear; the implementation can be as well. In the Notice (at ¶ 24), the Commission calls for comment on the need for "disclosure of technical information and protocols at the highest level of disaggregation feasible" in order to ensure sufficient knowledge of network elements that interconnectivity is available.

The telecommunications standards development community has dealt with the telecommunications interconnectivity issue since divestiture of the Bell System and has generally accomplished interconnectivity without knowledge of the proprietary content of each manufacturer's equipment or each carrier's private operational information. By developing open and public interconnection standards for telecommunications which the interested parties can meet without being required to have access to

proprietary information, knowledge of the internal, manufacturer-specific and carrier-specific implementations is unnecessary.[5] As Bellcore notes, "Section 273(c)(1) requires disclosure of protocols and technical requirements for connection with and use of exchange service. These are interface requirements and generally do not reach the innards of the services and the equipment that forms them . . .. Disclosure should only be required for those signals and functions necessary for interconnection." *See* BellCore Comments at 12.[6] This protects the opportunities for innovation on the part of the manufacturer and allows it to provide added value, beyond the telecommunications standards, which can be attractive to the carriers as they attempt, in their market, to differentiate their services from those of the other carriers.

Where an environment of true open interconnectivity with proprietary innovative implementation exists, competition flourishes, the carriers benefit, and accelerated deployment of new features is prevalent. Clearly, the Commission does not want to stifle telecommunications innovation by requiring full disclosure of the "greatest disaggregation" of details, or "the most complete disclosure that is possible or practical" from each manufacturer, except where such information would be necessary in order to practice a standard.

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[5] The present lack of need for proprietary information in the context of telecommunications standards for interconnectivity and interoperability differs from the need in the computer industry for access to proprietary information which may in fact be necessary to practice a standard.

[6] By use of the phrase "generally do not reach the innards of a service," BellCore itself suggests there may be circumstances even in telecommunications where more information than is publicly available may be necessary to practice a standard. Clearly, the Commission should leave itself room to require that information be provided where it becomes necessary.

Moreover, the sweeping language the Commission proposes for disclosure is fraught with litigation risk to telecommunications manufacturers and telecommunications service providers alike. Entities seeking additional proprietary information to achieve their own anticompetitive ends may explore the bounds of the Commission's intent by alleging that telecommunications carriers and/or manufacturers have not complied with the Commission's rules and, as proposed, this entity might be correct even if that manufacturer and/or carrier had provided more than sufficient information to allow interoperability. Clearly, the Commission should not inadvertently seek to create yet another opportunity to abuse the Commission's processes and adversely affect the rapid pace of product development and innovation through competition among providers of goods and services.

IV. THE COMMISSION NEED NOT ADOPT ADDITIONAL RULES GOVERNING THE USE, PROTECTION AND DISSEMINATION OF GENERAL PROPRIETARY INFORMATION.

In the Notice [paragraphs 24, 39, and 42], the Commission suggests that there may be a need for additional rules for the use, protection, and dissemination of proprietary information. However, as BellCore aptly points out, the force of general business law, intellectual property rights, and antitrust law has been sufficient to maintain an acceptable level of order in the handling of proprietary information. *See* BellCore Comments at 15. ("There is nothing unique about certification or standards development activities that warrants special regulation of this by the FCC.") Rules, procedures, and by-laws of SDOs are promulgated to prevent even the appearance of illegal or anticompetitive activity. Certainly, however, FNC would expect the FCC

to consider promulgating additional rules or taking specific action to make such information available in the future should it become necessary.

V. CONCLUSION

FNC requests that the Commission make every effort to minimize the untoward, negative impact on telecommunications standards development which could be brought on inadvertently in implementing Section 273 of the 1996 Act. To that end, FNC urges the Commission to ensure that non-accredited SDOs adopt the same open processes followed by accredited SDOs in both the national and international community. The Commission should not permit the development of network-wide interoperability standards by non-accredited standards development organizations who do not provide for open, low cost, public participation in the process. FNC urges the Commission to make every effort to retain the open standards development processes as they exist today and to avoid the potential privatization of the development of national and global interconnectivity standards by special interests.

Respectfully Submitted,

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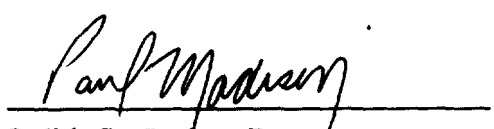
By: 

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